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ABSTRACT

Efforts to evaluate the extent to which twelve characteristics of the University of Houston's Professional Teacher Preparation Program (PTPP) had been implemented during the 1976-1977 academic year are described. The PTPP had been built on the assumption that an instructional system in teacher education would be more effective if it were competency based, campus centered and field oriented, role model based, criterion referenced, pluralistic, humanized, personalized, modularized, multiinstitutional, systemized, regenerative, and offered alternative routes to goal attainment. The meanings of each of these terms as they apply to Houston's PTPP are given; goals of the evaluation are defined: and data needs surveyed. Data collection involved surveys of students, instructors, supervisors, and supervising teachers as to their views on the levels at which the 12 characteristics had been implemented as well as analyses of program documents, policy statements, and instructional materials. Brief descriptions of selected study findings are offered, along with a consideration of limiting factors. It is suggested that, while progress had been made in incorporating program characteristics, there is much room for improvement. Use to date of information gained in the survey is described, and projections of future PTPP evaluation efforts are given. (HJB)

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EVALUATION OF INSTRUCTIONAL SYSTEM CHARACTERISTICS OF THE PROFESSIONAL TEACHER PREPARATION PROGRAM AT THE UNIVERSITY OF HOUSTON

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Introduction

The Professional Teacher Preparation Program (PTPP) is the undergraduate teacher education program of the College of Education at the University of Houston. The PTPP is designed for teacher education students pursuing baccalaureate degrees and provisional certification as elementary school teachers, secondary school teachers, or teachers of all levels in art, health and physical education, or music. Thus, the PTPP is a college-wide effort to develop and operate an integrated and comprehensive, competency based instructional system for the training of undergraduate teacher education students.

The PTPP traces its beginning to 1966 when the faculty of the College of Education committed itself to innovative approaches for the design and operation of professional teacher education programs. This effort was greatly enhanced by a 1970 grant from the Trainers of Teacher Trainers (TTT) Project and by subsequent grants from the Texas Teacher Center Project and the Teacher Corps Program. By the end of the first year of the TTT Project, the design of a competency based teacher education program had been completed. This program was field tested with 64 prospective teachers--half of whom were elementary education majors and half of whom were secondary education majors--during the 1971-72 and 1972-73 academic years. The program was revised on the basis of data from this field test and an additional 121 students participated in the revised program during the 1972-73 and 1973-74 academic years.

Having assessed the impact of the program during these two field tests, in the spring of 1973 the faculty voted to utilize the competency based approach in all undergraduate teacher education programs in the College beginning with

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the fall semester of that year. Since that time, effort has been directed toward making the entire undergraduate teacher education program a competency based instructional system.

Assessment of the program's first year of full operation suggested the need for far better integration and coordination of the program's components. Systemic development had been lacking. A rather piecemeal effort had resulted in many good, but ill fitting, program "pieces." Thus, in the summer of 1974, in order to enhance the program's effectiveness and efficiency a management system was created. The Program Development and Implementation Council (PDIC) became the management team responsible for coordinating and facilitating the conceptualization, design, development, implementation, operation, and evaluation of the PTPP.

The central task of the PDIC has been and continues to be one of program coordination and facilitation while responsibility and accountability for the design and delivery of the various instructional components of the PTPP have rested with various operating units within the College. The PDIC has undertaken extensive program development activities in an effort to conceptualize and design an integrated, comprehensive, and effective instructional system. Much of this work took place during the 1974-75 academic year. This included the specification and, in April of 1975, the formal adoption of twelve assumptions regarding those instructional system characteristics the faculty believed were essential to the operation of an effective teacher education program. Thus, the PTPP has been built on the assumption that an instructional system for the preparation of teachers is more effective when it is:

1. Competency based; that is, the competencies to be demonstrated by the student are made explicit, the criteria to be applied in assessing the student's competencies are made explicit, and the student is held accountable for meeting those criteria. The emphasis is on the demonstration, not the acquisition, of those competencies specified as program expectations.
2. Campus-centered and field-oriented; that is, students are provided with opportunities to experience instruction and to demonstrate competence both on campus and in field sites depending upon the nature of the particular instructional or assessment activity, and a determination as to where that activity can most effectively and efficiently take place.
3. Role-model based; that is, a conceptual model of the teacher's role is used as a basis for identifying and specifying those competencies students are expected to demonstrate.

4. Criterion-referenced; that is, assessment procedures are designed to determine whether or not a student has demonstrated competency at or above the level of mastery specified; the competency of each student is judged on the basis of predetermined criteria and is not determined through a comparison involving other students.

5. Pluralistic; that is, there is conscious acceptance of the notion that no one philosophy of instruction has been proved best; consequently, a variety of divergent views are posited as untested assumptions which the system must test.

6. Humanized; that is, program design and operation recognize the dignity and worth of each individual so that each perceives that he or she is being treated as one of worth.

7. Personalized; that is, the student is provided with instruction which takes into account his or her uniqueness.

8. Modularized; that is, the delivery of instruction is accomplished through the utilization of instructional modules; instructional modules are sets of learning activities--rationale, objectives, prerequisites, pre-assessment procedures, learning alternatives, post-assessment procedures, and remedial procedures--which are intended to facilitate the learner's acquisition and demonstration of a particular competency or set of competencies.

9. Multi-institutional; that is, the design and operation of the teacher education program is a responsibility shared by colleges, public schools, and the organized teaching profession.

10. Systemized; that is, the systems approach is used in program design and operation.

11. Regenerative; that is, the program is an open system capable of continuous revision on the basis of constructive data supplied by sound formative and summative evaluation procedures.

12. A single system with alternatives within it; that is, the program is a single instructional system which constitutes an integrated, comprehensive whole; however, the system does accommodate a divergence of viewpoints within its confines.

While the 1974-75 academic year was characterized by efforts of a program conceptualization and design nature, the 1975-76 academic year was marked by a move from program design to program development. These program development activities included a conscious effort to develop an instructional system which exemplified the twelve operational characteristics which had been adopted.

Full implementation was undertaken during the 1976-77 academic year. During this period, program development had largely given way to full program implementation. Operation of the program during the 1976-77 academic year, in effect, constituted a field test as this period was the first time that the college had tried to "put together all of the pieces" of the PTPP. Program development had reached that stage when it became possible--and desirable--for

evaluation processes to describe and analyze those "pieces" and the whole they constituted. Thus, program evaluation was viewed as the next program development task to be undertaken.

In anticipation of the need for program evaluation, in the spring of 1976, the PDIC appointed a task force composed of seven faculty members and chaired by the associate dean for undergraduate studies. The task force was given responsibilty for designing and carrying out a comprehensive evaluation of the PTPP. The major purpose of that evaluation was, and continues to be, to provide data from which to make informed decisions regarding program refinement and improvement. This paper described one aspect of that effort: an evaluation of the extent to which the twelve instructional system characteristics which had been adopted in 1975 were operationalized by the program during the 1976-77 academic year.

Goals

A first step in the task force's efforts to design and carry out a comprehensive evaluation of the PTPP was the specification of the goals and objectives the evaluation process was to achieve. It was intended that the evaluation process should:

1. Provide information which would be used to support the instructional system's efforts to facilitate student competency attainment.
2. Provide information concerning student progress, student achievement, and program effectiveness.
3. Provide information which would be useful in promoting closer and more productive communication with students.
4. Provide information which would be responsive to the expressed data needs of faculty who are implementing the program.
5. Provide data which are timely, easily obtained, and credible.
6. Provide an information base for decision-making related to program revision.

Given these goals, it was determined that a three-person sub-group of the task force should undertake an evaluation of the extent to which the PTPP instructional system was exhibiting the twelve operational characteristics agreed to during the program's conceptualization. It seemed to be important to describe the instructional system and determine the extent to which it was, or was becoming, what it was intended to be. This seemed to be an especially important task for four major reasons. First, program designers had spent considerable effort

to conceptualize and specify the instructional system characteristics they believed were essential to program effectiveness, and it appeared to be of benefit to determine the extent to which they were successful in operationalizing their conceptualization. Second, while much had been written and said about competency based teacher education, it appeared that few competency based teacher education programs existed. Indeed, there were educators who seemed to express doubts concerning the viability of creating such programs. It was assumed that there was benefit to be gained by testing that assumption. Third, if anything was to be said about the program's effectiveness with regard to its ability to facilitate student competence, it seemed quite essential that the nature of that program's instructional system be thoroughly described and understood. Fourth, if the program was to be improved, there was a crucial need for information about the nature of its instructional system.

As one examines the reasons given above, it is essential that one understands that the primary purpose of this effort was to provide information which could be used to revise and improve the instructional system. Consequently, the evaluation process described here was intended to facilitate instructional decisions and was not intended to yield generalizable data. This evaluation, therefore, necessarily took place within an instructional context, not a research context. Throughout this paper it is helpful to recognize that the data needs of an instructional system--and program managers--are quite different from those of the research study--and researchers. The data need in this instance was for reasonably valid, reliable, and "inexpensive" information about the twelve instructional system characteristics which has been specified.

Data Needs

Given its task, the sub-group began to consider the various types of data which might be used to determine the extent to which each of the twelve characteristics was present in the program. Each sub-group member, acting independently, took each of the twelve characteristics and generated sets of indicators which one might expect to find if each of those instructional system characteristics had been fully operationalized. The resulting lists of indicators were discussed; the merit of each indicator was debated. A consensus process was used by the sub-group to generate a single, rather extensive, list of agreed-upon indicators for each characteristic.

The next step was to determine which of those indicators would be used to determine the extent to which the characteristics were present in the program. Two criteria were used in making these decisions: (1) which of the indicators appeared to be most important; that is, which seemed to capture the essense of the characteristic; and (2) for which of the indicators was it reasonably feasible to collect data during the spring 1977 semester. Through lengthy discussion, the three members of the sub-group reached consensus and subsequently presented their recommendations to the total task force. The task force considered the recommendations and suggested some modifications; these suggestions were accepted. Thus, the indicators about which data would be collected were agreed upon.

Data Collection Procedures

The indicators about which data were to be collected were of two types: (1) perception; and (2) documentation. It was determined that perceptual data concerning the twelve characteristics should be collected from students, instructors, supervisors, and supervising teachers associated with the program. Several types of data-gathering procedures were considered to be appropriate for this purpose. However, it was decided that these data, given feasibility considerations, would best be collected through the use of questionnaires--a reasonably good means of collecting perceptual data. This decision led to the construction of four questionnaires, one for each of the four groups to be sampled. Additionally, it was determined that data concerning the characteristics might be gained through analyses of various program documents, policy statements, and instructional materials. It was decided that the use of checklists might be an effective means for this purpose since a checklist can be designed to provide fairly easily obtained, objective information as to whether or not a given characteristic is present.

Questionnaires were mailed to all supervising teachers and student teachers toward the end of the spring semester. At about the same time, questionnaires for the instructors and university supervisors were distributed by instructors in selected classes so that a copy might reach every student enrolled in the PTPP. Questionnaires were returned by way of the same channels.

In order to obtain the program documents which were to be analyzed, the sub-group provided the associate dean for undergraduate studies with a list of each of those documents which was needed. The associate dean, in turn,

requested various individuals with PTPP responsibilities to provide the specified documentation. These documents were to be sent to the associate dean, who passed them on to the sub-group for analysis.

Some Findings

Before briefly describing a few of the study's findings, it is perhaps wise to consider several of the factors which may limit those findings. First, the findings reported here are valid to the extent that the indicators chosen to represent the program characteristics do in fact reflect those characteristics. Second, the accuracy of the findings is influenced by the extent to which the data chosen for analysis represent the selected indicators. Third, the findings and conclusions are limited by the fact that the return rate on the questionnaires and the requested documentation was only moderately high. Fourth, the findings are limited by the reliability and validity of both the questionnaires and the analysis of the documents; no attempt was made to prepare statistical estimates of their validity and reliability. And fifth, the findings are limited to the extent that questionnaire responses and program documentation were accurate and honest.

Space precludes reporting more than just a few of the findings from the questionnaire data and the document analyses. Several of the more interesting items are described here to provide examples of the kinds of data obtained and the manner in which they were treated.

Questionnaire Data. The first twelve items on each of the four questionnaires which were administered to the students, instructors, supervisors, and supervising teachers in this study consisted of statements which presented each of the program's assumptions concerning an effective instructional system. Using a nine-point scale, with one being strongly disagree and nine being strongly agree, respondents were asked to indicate the degree to which they felt that the program had been consistent with each assumption. For example, the first statement on each of the four questionnaires was concerned about the extent to which respondents perceived the program to be competency based.

The statement to which respondents were to react said: "The program is competency based; that is, the competencies students are asked to demonstrate are made explicit, the criteria applied in assessing the competencies of students are made explicit, and students are held accountable for meeting those criteria."

Table 1 presents the results obtained fr students, instructors, supervisors, and supervising teachers for those first twelve items. Mean score data suggest that all four groups agreed that the program had operated in a manner which was consistent with the stated assumptions. Mean scores ranged from a low of 5.13 to a high of 7.85. Student mean scores ranged from 5.99 (personalized) to 7.29 (campus-centered and field-oriented) with the other ten scores falling between 6.10 and 7.04, a rather small range.

Instructor mean scores ranged from 5.13 (personalized) to 7.64 (campus/field); overall they were a bit lower than student mean scores with five scores ranging from 5.13 to 5.96, and another six scores ranging from 6.02 to 6.71. Supervisor mean scores ranged from 5.38 (role-model based) to 7.47 (humanized); four of these ranged from 5.38 to 5.78, while seven ranged from 6.23 to 6.96. Overall, the mean scores obtained from supervising teachers were the highest; they ranged from 6.33 to 7.85.

These results were encouraging. While the data suggest that there was much room for improvement, they also indicated progress. The data from university personnel--instructors and superivsor, those most closely involved in the program's development--indicated that they agreed the program was operationalized in a way which was consistent with the specified assumptions. However, they were the groups which perceived the greatest lack of congruence between program intent and program reality. They seem to have said that "we're getting there but we're not there yet." Student data suggest that students also agreed that the program was reasonably consistent with the assumptions on which it was based. However, the data also suggest areas needing improvement. On the other hand, data from the supervising teachers seem to indicate that they felt the program was well on its way to "getting where it wanted to go." One might speculate that their views are colored by their experiences with other teacher education programs, including those in which they were undergraduates.

In summary, then, the data from the first twelve items on each of the four questionnaires, as presented in Table 1, suggest that while progress had been made in operationalizing the instructional system characteristics there existed much room for improvement.

In an attempt to gain a greater understanding of student perceptions, student questionnaire data were analyzed according to the respondent's certification program (elementary education; secondary education; art education; health and

Table 1

Summary of Student, Instructor, Supervisor, and Supervising Teacher Questionnaire Data for All Twelve Program Characteristics, Variables 1 through 12. Items 1 through 12

Program Characteristic	Students			Instructors			Supervisors			Supervising Teachers		
	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD
Competency Based	510	6.55	1.99	44	6.55	1.66	23	5.61	1.88	213	6.33	2.31
Campus/Field	503	7.29	1.70	44	7.64	1.66	23	6.65	2.08	197	7.26	1.88
Role-Model Based	493	6.24	1.96	42	5.88	1.99	21	5.38	2.22	197	6.80	1.94
Criterion-Referenced	496	6.49	2.11	43	6.02	2.45	23	6.96	2.16	206	6.77	2.20
Pluralistic	503	7.04	2.10	43	6.05	2.25	23	6.91	2.15	206	7.42	1.92
Humanized	509	6.92	2.04	44	6.41	2.43	23	7.47	1.90	212	7.85	1.72
Personalized	507	5.99	2.37	45	5.13	2.70	23	5.78	2.65	196	6.95	2.21
Modularized	501	6.98	1.95	45	6.71	1.97	22	6.23	2.14	190	6.52	2.14
Multi-Institutional	510	6.98	1.80	45	5.96	2.54	23	6.39	2.54	212	7.73	1.79
Systemized	508	6.33	2.05	45	6.11	2.35	23	6.65	2.04	197	7.17	1.83
Regenerative	491	6.35	2.09	45	5.64	2.59	22	6.77	2.07	191	7.35	1.77
Single System	505	6.10	2.03	45	5.24	2.52	22	5.73	2.12	193	6.90	1.99

physical education; or music education), and his or her standing (Phase I, II, III, or IV). Two examples of these data are presented in Tables 2 and 3. Table 2 presents the results for Item 1, the item which focused on the students' views regarding the extent to which the program was competency based. Table 3 presents the results for Item 8 which was concerned with the degree to which the program was modularized.

The mean scores presented in Table 2 range from 6.20 to 7.31. When subjected to analysis of variance procedures, no statistically significant differences were found between groups. It was concluded that the groups did not differ significantly with regard to their perception of the degree to which the program was competency based. On the other hand, statistically significant differences were found when the data presented in Table 3 were analyzed using analysis of variance and planned comparison procedures. These mean scores ranged from 5.50 to 7.83. In general, the results indicated that the perceptions of Art Education majors differed from those of Secondary Education majors. It seemed reasonable to conclude that their experiences differed with regard to the utilization of instructional modules. This suggested that there might be benefit in further examining the program so that these differences might be explained.

The first twelve items of the questionnaire provided data relevant to broad areas. Data from other questionnaire items--and the document analyses--revealed more specific problems. While the first twelve items focused on the total program, the other items tended to focus on specific aspects of the program. For example, on the student questionnaire four groups of items, each consisting of four items--a total of sixteen--were concerned with the extent to which four courses or groups of courses were competency based. An additional four items focused on the degree to which each of those four courses or groups of courses were modularized. The data from these items are presented in Tables 4 and 5.

Data reported in Table 4 indicate that one of the four courses or groups of courses was perceived by students to have been considerably less competency based than the other three. Mean scores for FED 361: Foundations of Education ranged from 5.15 to 5.76 while scores for the others (C&I 362: Introduction to the Profession of Teaching; C&I 333: Generic Teaching Competencies; C&I 335: Multicultural Education; and the various methods courses) ranged from 6.70 to 7.20. Likewise, as indicated by the data in Table 5, that same

Table 2

Summary Data from Student Questionnaire Item 1. The program is competency based; that is, the competencies I was asked to demonstrate were made explicit, the criteria applied in assessing my competencies were made explicit, and I was held accountable for meeting those criteria.

Students	N	Mean	SD
Elementary Education Majors			
Phase I	40	6.20	2.10
Phase II	58	6.28	2.25
Phase III	69	6.83	1.73
Phase IV	84	6.51	2.03
Secondary Education Majors			
Phase I	34	6.77	1.99
Phase II	36	6.81	2.12
Phase III	45	6.42	1.73
Art Education Majors			
Phase I	5	7.20	2.49
Phase II	10	7.10	1.52
Phase III	10	6.60	2.27
Health and Physical Education Majors			
Phase I	16	7.31	1.85
Phase II	21	6.76	1.51
Phase III	28	6.21	2.23
Music Education Majors			
Phase I	5	7.00	1.00
Phase II	9	6.67	2.00
Phase III	15	6.73	1.79
Total	510	6.55	1.99

Table 3

Summary Data from Student Questionnaire Item 8. The program is modularized; that is, my instruction was accomplished through the utilization of instructional modules; instructional modules are sets of learning activities which are intended to facilitate my acquisition and demonstration of a particular competency or set of competencies

Students	N	Mean	SD
Elementary Education Majors			
Phase I	40	6.90	1.92
Phase II	59	6.61	2.36
Phase III	68	7.22	1.66
Phase IV	85	7.19	1.41
Secondary Education Majors			
Phase I	34	7.79	1.51
Phase II	35	7.83	1.58
Phase III	45	6.98	2.04
Art Education Majors			
Phase I	4	6.00	1.41
Phase II	8	5.50	3.07
Phase III	9	6.00	1.58
Health and Physical Education Majors			
Phase I	16	7.44	1.37
Phase II	18	6.89	1.97
Phase III	28	6.36	2.30
Music Education Majors			
Phase I	5	7.20	1.30
Phase II	9	6.56	2.07
Phase III	14	5.71	2.64
Total	501	6.98	1.95

Table 4

Summary Data from Student Questionnaire for Variable 1, Items 36 through 51

Item	Course	N	Mean	SD
36	FED 361	391	5.27	2.87
40	FED 361	393	5.15	2.85
44	FED 361	386	5.31	2.85
48	FED 361	385	5.77	2.80
37	C&I 362-333	476	7.20	2.06
41	C&I 362-333	480	6.00	2.08
45	C&I 362-333	480	6.86	2.20
49	C&I 362-333	462	7.08	2.11
38	C&I 335	210	7.04	2.05
42	C&I 335	205	6.71	2.31
46	C&I 335	208	6.75	2.32
50	C&I 335	201	6.90	2.21
39	Methods	342	6.94	2.09
43	Methods	337	6.77	2.09
47	Methods	330	6.84	2.01
51	Methods	323	6.88	2.04

Table 5

Summary Data from Student Questionnaire for Variable 8, Items 114 through 117

Item	Course	N	Mean	SD
114	FED 361	360	3.57	2.92
115	C&I 362-333	454	7.09	2.20
116	C&I 335	194	7.17	2.05
117	Methods	310	6.22	2.57

course was viewed as less modularized (mean score of 3.57) than the other three (mean scores of 7.09, 7.17, and 6.22). These findings generated great concern regarding the structure of the foundations of education course.

Document Analyses

In addition to the collection and analysis of perceptual data, the evaluation--as noted earlier--included an analysis of various pertinent program documents. As with the questionnaire data, the intent was to look for evidence that the program characteristics which had been specified as assumptions had been operationalized. The sorts of documents which were requested included:

1. Descriptions of all instructional modules used in PTPP. These were examined for evidence of competency based instruction, modularized instruction, and criterion-referenced assessment, for example.
2. Descriptions of faculty, program area, and department grading policies and copies of all course grades given to students during the fall 1976 semester. These were examined for evidence of criterion-referenced assessment procedures and grading, for example.
3. Program policy statements. These contained descriptions of formally adopted goals, assumptions, and required student competencies. These were examined for evidence of a number of the characteristics.

Because the module descriptions analyses represented the most time-consuming of the document analyses aspect of the evaluation and because they yielded some of the most interesting information, the findings obtained from those analyses are highlighted here. Instructors were asked to submit descriptions of the instructional modules used in each course. Each set of materials was examined to determine whether or not the agreed upon instructional module components were present. That is, each was analyzed to determine whether it contained a rationale, objectives, prerequisites, pre-assessment procedures, learning alternatives, post-assessment procedures, and remediation. Further, a checklist was used to rate each component of each module according to whether it: (1) was present and met the specified criteria; (2) was present but did not meet the specified criteria; and (3) was not present.

Of the thirty-six courses examined, only seventeen were found to utilize instructional modules in the delivery of instruction, while nineteen either submitted no instructional materials or presented materials which were not organized in a modular format. For those seventeen courses which were modularized, a total of 178 module descriptions were examined. It was found that in only six

courses were more than two-thirds of the components present and adequate according to the criteria. In descending order, the most often absent components were: remediation, prerequisites, pre-assessment, and post-assessments. Rationales were usually present in the module descriptions but many did not meet the specified criteria. The analysis led to the conclusion that less than half of the PTPP courses were modularized and of those which were, the modules were often deficient in terms of the components they were to contain. Table 6 presents the data for C&I 362: Introduction to the Profession of Teaching, a course for which the findings were rather typical.

Data Utilization

In the beginning of this paper the major purpose of this evaluation effort was described as a process that was to provide information on which to base decisions relevant to program improvement. Thus far the discussion has focused on data collection and analysis. In this section a brief example of how the data have been used thus far is provided.

Findings from the module descriptions analyses were made available to program managers in June 1977. They used the findings to begin to identify priority areas needing improvement. As a result of their deliberations, a task force was formed in the summer of 1977 and charged with responsibility for revising instructional modules for C&I 362 and 333. The products of that task force, thirty-nine modules, were designed so as to ensure that each contained all of the components instructional modules were expected to contain, and to ensure that all components met the criteria which had been established. An analysis of the thirty-nine instructional module descriptions produced by the task force confirmed that to be the case. In the fall of 1977, those modules were utilized with all C&I 362 and C&I 333 students. During the semester, student and instructor opinions were sampled through the use of feedback forms for each module. Data from students and instructors were very positive. Few weaknesses were identified; recommended modifications were relatively minor. Student questionnaire data from the fall semester indicated some improvement with regard to student perceptions of the extent to which the program was modularized. For example, on the questionnaire item dealing with modularization, a mean score of 6.90 had been obtained for the forty elementary education students who took C&I 362 during the spring, while a mean score of 7.17 was obtained for the

Table 6

An Analysis of the Instructional Modules: C&I 362.
Introduction to the Profession of Teaching

Module	Rationale	Objectives	Prerequisites	Pre-Assessment	Learning Alternatives	Post-Assessment	Remediation
1	2	2	0	0	2	0	0
2	2	2	0	0	2	0	0
3	2	2	0	0	2	0	0
4	2	2	0	0	2	0	0
5	2	2	0	0	2	0	0
6	1	2	2	2	2	2	0
7	1	2	2	2	2	2	2
8	1	2	2	2	2	2	2
9	0	0	0	0	0	0	0

Code: 0 = Component not present.
1 = Component present; did not meet criteria.
2 = Component present; met criteria.

eighty-two who took it in the fall. As additional data became available to program managers and the faculty, continued efforts will be made to improve the program. Such efforts are based on the instructional system assumption concerned with program regeneration. It has been assumed that the program will be more effective if it operates as an open system capable of continuous revision on the basis of constructive data supplied by sound formative and summative evaluation procedures.

Future Steps

The task force plans to continue the PTPP evaluation efforts that were initiated in 1976. The task force will continue to collect data relevant to instructional system characteristics, student characteristics, and student satisfaction and success. The evaluation plan will be expanded to examine the operations of the learning resource center and to provide more specific information on particular components of the program. At this point in time, serious consideration is being given to collecting data every other year rather than yearly because of cost factors and because this would allow program components time to make the modifications called for by findings from the evaluation information. Moving to an every-other-year approach might also avoid the potential problem of alienating students and faculty who might resent spending the time which data collection and program modification requires of them.

How do we evaluate our evaluation efforts? Generally, we are pleased with the kinds of data we collected on this first attempt. We are displeased with the tremendous time lag between when some of the data were collected--Spring 1977--and when they were analyzed--Winter 1977. This time lag caused us to fail to meet one of our goals of the evaluation, that is, to present data that are timely for decision-making purposes. We encountered a plethora of problems related to the coding of data, key punching, computer programming, and computer operations.

Some of these problems were of our own making and were largely due to our inexperience, while others resulted from circumstances beyond our control. Regardless of the reason, we do not feel that we can award ourselves a passing grade on the criterion of timeliness. The experience we have gained, however, should result in tremendously improved efficiency in the data collection and analysis processes. In summary, we learned a lot, we liked what we did, we found it worthwhile, and we are going to do it again.